

The opinion in support of the decision being entered today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* SANDRA A. RICHLIN, SUZANNE SCHMOKER, and  
PAUL T. VAN GOMPEL

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Appeal 2007-1323  
Application 10/032,701  
Technology Center 3700

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Decided: July 17, 2007

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Before DONALD E. ADAMS, ERIC GRIMES, and LORA M. GREEN,  
*Administrative Patent Judges.*

ADAMS, *Administrative Patent Judge.*

DECISION ON APPEAL

This appeal under 35 U.S.C. § 134 involves claims 11-20, 31-40, 42, and 44-48, the only claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

## INTRODUCTION

The claims are directed to an absorbent garment. Claims 11, 14, 16, and 42 are illustrative:

11. An absorbent garment comprising:

a body panel having a line of weakness extending across at least a portion thereof, wherein said body panel has a tear strength of less than about 5 lbf along said line of weakness.

14. The absorbent garment of claim 11 wherein said body panel has a tensile strength of less than about 6.62 lbf across said line of weakness.

16. The absorbent garment of claim 11 further comprising a fastener member bridging said line of weakness, wherein said fastener member is fixedly secured to said body panel on one side of said line of weakness and is releasably engaged with said body panel on the other side of said line of weakness.

42. An absorbent garment comprising:

a body panel having a line of weakness extending across at least a portion thereof in a longitudinal direction, wherein said body panel has a tear strength of less than about 5 lbf along said line of weakness, wherein said body panel comprises a front body panel extending continuously between and defining opposite, laterally spaced side edges joined to opposite, laterally spaced side edges of a rear body panel at a pair of side seams, wherein said line of weakness is formed in said front body panel between said side edges of said front body panel, and wherein said front body panel has a first terminal crotch edge formed at least at a midpoint between said side edges of said front body panel and said rear body panel has a second terminal crotch edge formed at least at a midpoint between said edges of said rear body panel, wherein said first and second terminal crotch edges are longitudinally spaced apart and define a longitudinally extending gap therebetween at said midpoints between said side edges of said front and rear body panels, and further comprising an absorbent composite bridging said longitudinally extending gap at said midpoints between said side edges of said front and rear body panels and overlying said midpoints between said

side edges of said front and rear body panels, and wherein said absorbent composite is connected to said front and rear body panels.

The Examiner relies on the following prior art references to show unpatentability:

Igaue	UK 2 267 024	Nov. 24, 1993
Van Gompel	PCT WO 00/47152	Aug. 17, 2000

The rejections as presented by the Examiner are as follows:

1. Claims 11-20, 31-40, 45, and 46 stand rejected under 35 U.S.C. § 102(b) as anticipated by Igaue
2. Claims 11-20, 31-40, 45, and 46 stand rejected under 35 U.S.C. § 103(a) as obvious over Igaue.
3. Claims 42, 44, 47, and 48 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Igaue and Van Gompel.

We affirm the rejections under 35 U.S.C. § 103(a) and reverse the rejection under 35 U.S.C. § 102(b).

## DISCUSSION

Igaue:

Claims 11-20, 31-40, 45, and 46 stand rejected under 35 U.S.C. § 102(b) as anticipated by Igaue.

The claims are drawn to an absorbent garment (claims 11-20 and 45) and a method of using an absorbent garment (claims 31-40 and 46). According to Appellants' Specification, "[a]bsorbent garments can be configured as . . . a diaper-type product . . ." (Specification 1). The claims require the garment to comprise a body panel having a line of weakness

extending across at least a portion thereof. The Specification defines the term “line of weakness” as

any region or area of weakened material, preferably having a length and which may or may not have a defined width, and can include linear and non-linear patterns. . . . The line of weakness can include a perforation or other series of cuts, a thinning, or breakage or separation of material . . . that is more easily torn or broken than the adjacent portions. . . .

(*Id.* at 7) Appellants’ specification discloses that the “garment provides a simple and convenient way to convert a pant-type garment into an open product simply by providing a line of weakness that has sufficiently low tensile and tear strengths, so as to allow the user to break the garment along the line of weakness without undue effort” (Specification 2). The claims require, *inter alia*, the body panel to have a specific tear strength along the line of weakness.

The Examiner finds that Igaue teaches all of the claimed limitations except for the specific tear strength (Answer 4). Igaue teaches a disposable diaper, an absorbent garment within the scope of Appellants’ claimed invention (Igaue 1). Igaue’s diaper comprises cutting lines extending across at least a portion of the body panel of the diaper (Igaue 3). Igaue teaches that the cutting lines are formed by intermittent cuts or perforations (Igaue 3). According to Igaue, the front body of the diaper may be torn off from the rear body along the cutting lines allowing the diaper to be easily removed from the wearer (Igaue 10-11).

In sum, we find that Igaue teaches an absorbent garment (a diaper) comprising a body panel having a line of weakness extending across at least

a portion thereof as required by claims 11 and 31.<sup>1</sup> However, as the Examiner recognizes, Igaue does not teach the specific tear strength set forth in claims 11 and 31 (Answer 4). Nevertheless, the Examiner asserts that Igaue's diaper inherently has the claimed tear strength. We disagree.

As Appellants explain, “merely providing a perforation or line of weakness in a panel does not *necessarily* result in the panel having the claimed tear strength” (Br. 8; Reply Br. 3). Appellants explain that “[t]he tear strength can depend on many parameters, including . . . the configuration of the line of weakness” (*id.*). We are persuaded by Appellants' assertion that the configuration of the line of weakness may give rise to a difference in tear strength. Igaue simply states that “cutting lines are formed by intermittent cuts or perforations” (Igaue 3). “Under the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claims limitations, it anticipates.” *In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1349, 64 USPQ2d 1202, 1206 (Fed. Cir. 2002), citation omitted. On this record, there is no teaching or suggestion in Igaue that these intermittent cuts or perforations will inherently lead to the tear strength required by claims 11-20, 31-40, 45, and 46. Accordingly, we reverse the rejection under 35 U.S.C. § 102(b).

Obviousness:

Claims 11-20, 31-40, 45, and 46 stand rejected under 35 U.S.C. § 103 as obvious over Igaue. Appellants provide three claim groupings: (I) claims 11-13, 15, 17-20, 31-34, 36-40, and 46; (II) claims 14 and 45; and

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<sup>1</sup> Claims 12-20 and 45 ultimately depend from claim 11. Claims 32-40 and 46 ultimately depend from claim 31.

(III) claims 16 and 35. The claims of each group will stand or fall together. 37 C.F.R. § 41.37(c)(1)(vii). Therefore, we limit our discussion to representative claims 11, 14, and 16.

Claim 11:

Claim 11 is drawn to an absorbent garment. According to Appellants' Specification, "[a]bsorbent garments can be configured as . . . a diaper-type product . . ." (Specification 1). Claim 11 requires the garment to comprise a body panel having a line of weakness extending across at least a portion thereof. The body panels may be comprised of nonwoven materials (Specification 7). The Specification defines the term "line of weakness" as

any region or area of weakened material, preferably having a length and which may or may not have a defined width, and can include linear and non-linear patterns. . . . The line of weakness can include a perforation or other series of cuts, a thinning, or breakage or separation of material . . . that is more easily torn or broken than the adjacent portions. . . .

(*Id.*) Appellants' Specification discloses that the "garment provides a simple and convenient way to convert a pant-type garment into an open product simply by providing a line of weakness that has sufficiently low tensile and tear strengths, so as to allow the user to break the garment along the line of weakness without undue effort" (Specification 2). Claim 11 requires the body panel to have a tear strength of less than about 5 lbf along the line of weakness.

The Examiner finds that Igaue teaches all of the claimed limitations except for the specific tear strength (Answer 4). Igaue teaches a disposable diaper, an absorbent garment within the scope of Appellants' claimed

invention (Igaue 1). Igaue's diaper may be made from a nonwoven fabric (Igaue 9). Igaue's diaper comprises cutting lines extending across at least a portion of the body panel of the diaper (Igaue 3). Igaue teaches that the cutting lines are formed by intermittent cuts or perforations (Igaue 3). According to Igaue, the front body of the diaper may be torn off from the rear body along the cutting lines allowing the diaper to be easily removed from the wearer (Igaue 10-11).

In sum, we find that Igaue teaches an absorbent garment, diaper, and comprises a body panel having a line of weakness extending across at least a portion thereof as required by claim 11. Igaue's diaper and Appellants' diaper may be made of a nonwoven material. While the Examiner recognizes that Igaue does not teach the specific tear strength set forth in claim 11 (Answer 4), the Examiner finds that it would have been prima facie obvious to a person of ordinary skill in the art at the time the invention was made "to discover the optimum or workable ranges, i.e. Appellant's claimed strengths, by routine experimentation . . ." (Answer 5). We agree.

A minor modification of the prior art, such as adjusting the configuration of the line of weakness to allow the diaper to be easily removed from the wearer, does not distinguish the claimed product from the prior art. *See KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007) (It is proper to "take account of the inferences and creative steps that a person of ordinary skill in the art would employ."). *See also id.* at 1742, 82 USPQ2d at 1397 ("A person of ordinary skill is also a person of ordinary creativity, not an automaton."). As set forth in *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955), "it is not

inventive to discover the optimum or workable ranges by routine experimentation.”

The evidence on this record establishes that both Appellants and Igaue introduced perforations into their diapers along a line of weakness to allow the diaper to be easily removed from the wearer (*cf.* Specification 2 and Igaue 10-11). In our opinion, it was well within the ordinary skill in this art to establish the optimum tear strength, as set forth in Appellants’ claim, by routine experimentation. For the foregoing reasons, we find no error in the Examiner’s *prima facie* case of obviousness.

In response, Appellants assert that “[t]he tear strength can depend on many parameters, including . . . the type of material and the configuration of the line of weakness” (Br. 8; Reply Br. 3). We are not persuaded. As discussed above, the materials used in Igaue’s diaper are the same as those in Appellants’ diaper. Further, as discussed above, we find that optimization of the configuration for the line of weakness, to allow the diaper to be easily removed from the wearer, is well within the level of a person of ordinary skill in the art.

We recognize Appellants’ assertion “that the claimed ranges achieve unexpected results, namely that the web can be weakened to a point where a user can easily break the panel along a line of weakness.” We are not persuaded that this result was unexpected. As Igaue explains, “cutting lines are formed [in the material] by intermittent cuts or perforations” (Igaue 3). These cutting lines allow the diaper to be easily removed from the wearer by tearing the front panel away from the rear panel along the cutting lines (Igaue 10-11). Accordingly, we find that Igaue clearly teaches Appellants’ alleged unexpected result.



Lastly, we recognize Appellants' argument concerning the processing of the article on a manufacturing line (Br. 9-10). We note, however, that the claims do not contain any particular process requirements. Accordingly, we do not find this argument persuasive.

On reflection, we find that the Examiner has set forth a *prima facie* case that claim 11 would have been obvious over Igaue, which Appellants have not rebutted. Accordingly, we affirm the rejection of claim 11 under 35 U.S.C. § 103(a). Claims 12-13, 15, 17-20, 31-34, 36-40, and 46 fall together with claim 11.

Claim 14:

Claim 14 depends from and further limits claim 11 to require that the body panel has a tensile strength of less than about 6.62 lbf across the line of weakness. The Examiner relies on Igaue as set forth above (Answer 3-5).

Appellants assert that their arguments regarding claim 11 apply to claim 14 as well (Br. 11). For the reasons set forth above, we are not persuaded by these arguments. Appellants' only other argument relates to Igaue's disclosure of a bond line having a bond strength of "1000 g/inch or higher. . ." (Br. 11-12). We note, however, that Igaue teaches that the bond line is distinct from the cutting line (Igaue 3). Accordingly, we are not persuaded by Appellants' argument.

Claim 14 requires that the garment of claim 11 have a tensile strength of less than about 6.62 lbf across the line of weakness. As the Examiner recognizes, Igaue is silent with regard to the tensile strength across the line of weakness (Answer 4). However, as discussed above, "it is not inventive to discover the optimum or workable ranges by routine experimentation."

*Aller.* The evidence on this record establishes that both Appellants and Igaue introduced perforations into their diapers along a line of weakness to allow the diaper to be easily removed from the wearer (*cf.* Specification 2 and Igaue 10-11). In our opinion, it was well within the ordinary skill in this art to establish the optimum tensile strength, as set forth in Appellants' claim, by routine experimentation. For the foregoing reasons, we find no error in the Examiner's *prima facie* case of obviousness. Accordingly, we affirm the rejection of claim 14 under 35 U.S.C. § 103(a). Claim 45 falls together with claim 14.

Claim 16:

Claim 16 depends from and further limits claim 11 to comprise a fastener member bridging the line of weakness. According to claim 16, the fastener member is fixedly secured to the body panel on one side of the line of weakness and is releasably engaged with the body panel on the other side of the line of weakness. The Examiner relies on Igaue as set forth above (Answer 3-5). In addition, we note that Igaue teaches a diaper comprising a fastener member bridging the line of weakness (Igaue 5 and Figure 1). Igaue's fastener member "may be a piece of tape having thereon a plurality of hooks such as Velcro (trademark) or Magic Tape (trademark) both of which are well known to those skilled in the art" (Igaue 9). In our opinion, a person of ordinary skill in the art would realize that Igaue's fastener member is releasably engaged with the body panel on the other side of the line of weakness.

Appellants assert that their arguments regarding claim 11 apply to claim 14 as well (Br. 12). For the reasons set forth above, we are not

persuaded by these arguments. Appellants' only other argument relates the processing of the article on a manufacturing line (Br. 12-13). We note, however, that the claims do not contain any particular process requirements. Accordingly, we do not find this argument persuasive. Accordingly, we affirm the rejection of claim 16 under 35 U.S.C. § 103(a). Claim 35 falls together with claim 16.

The combination of Igaue and Van Gompel:

Claims 42, 44, 47, and 48 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Igaue and Van Gompel. The claims have not been argued separately and therefore stand or fall together. 37 C.F.R. § 41.37(c)(1)(vii). Therefore, we limit our discussion to representative claim 42.

Claim 42 is drawn to an absorbent garment. The garment comprises, *inter alia*, a body panel having a tear strength of less than about 5 lbf along said line of weakness and "front and rear body panels having terminal crotch edges spaced apart to define a gap and an absorbent composite bridging the gap and connected to the panels" (Answer 5).

The Examiner relies on Igaue to teach a garment with "a unitary front and rear connected to an absorbent composite with a tearable line of weakness adjacent a side seam" (Answer 5). The Examiner relies on Van Gompel to teach an

open type diaper or pants type garment designed with a unitary front and rear connected to an absorbent composite or with front and rear panels having terminal crotch edges spaced apart to define a gap, i.e. nonunitary front and rear panels, and an absorbent composite bridging the gap and connected to the panels.

(*Id.*) Based on this evidence, the Examiner finds that the claimed invention would have been an obvious modification of Igaue's garment as taught by Van Gompel (Answer 5-6). We agree with the Examiner's reasoning.

In response, Appellants assert that claim 42 requires a tear strength of less than about 5 lbf along the line of weakness. (Br. 13). In this regard, Appellants rely on their arguments relating to claim 11 and assert that Van Gompel does not make up for the deficiencies in Igaue (*id.*). Having found no deficiency in the Examiner's reliance on Igaue, we are not persuaded by Appellants' assertion to the contrary. Accordingly, we affirm the rejection of claim 42 under 35 U.S.C. § 103(a). Claims 44, 47, and 48 fall together with claim 42.

#### CONCLUSION

In summary, we affirm the rejections under 35 U.S.C. § 103(a), and reverse the rejection under 35 U.S.C. § 102(b).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

#### AFFIRMED

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